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THE JOURNAL OF PHILOSOPHY

WHAT ARE UNIVERSALS?

I

IN a previous paper I dealt with the difference between characteristics and characters and the consequent difference between general and universal propositions, and between kinds and classes.[1] Characteristics were defined as the qualities of an existence that serve as the traits that enable it to be identified and distinguished as one of a kind. Characters form the content of an *if-then* proposition, a formula for defining *being* such-and-such. In this paper, I propose to discuss the nature of universals as that nature is determined by their identification with the content of *if-then* propositions. I shall begin by recurring to the equivocal meaning of *inclusion*. In one sense, it means being part of a collection or a member of a kind. Thus when it is said that "negroes are human beings" and that "Sambo is a negro," a kind of existence is first included in a superior kind, having other members, and then an individual thing is affirmed to be a member of the first kind. When it is said that triangles are plane figures, the linguistic form seems to be the same, but what is meant is that the definition of plane determines also the definition of triangularity. The latter is one of the modes or ways of *being* plane. Here *inclusion* designates falling within the scope of a definition: determined as one of the modes of the relation of characters that are fixed by the definition. Being plane has no meaning except as determined in the modes of being triangular, quadrangular, polygonal. "Human being" would still have a meaning if no negroes were known. Inclusion is here a matter of necessary relations of meaning, not of conjunction of observable facts.

The following illustration, taken from the Oxford Dictionary, may make the point clearer. "It is necessary to include in the *idea* of Labour all feelings of a disagreeable kind . . . connected with the employment of one's thought, or muscles, or both, in a particular occupation." Here is exemplified an instance of what is *necessary* in a *definition,* that which is an indispensable part of an *idea* or conception. Being a part of an idea is obviously different from being a part of an existential collection or a member of an existential

[1] This JOURNAL, Vol. XXXIII (1936), pp. 253–261.

kind. The statement says that the definition or conception of labor is necessarily incomplete and inadequate unless the character of being disagreeable is included or *comprehended*. It would be awkward linguistic expression that would say "Human beings comprehend negroes," while it would be a natural expression to say that the idea of humanity necessarily comprehends treating negroes as human. Similarly, when it is said that "Every good poet includes a critic," it is clear that what is meant is that being a poet implies being a critic; one character can not subsist without the other. The logical import is radically other than when it is said an item is included in a collection or a kind is embraced, enclosed, in another kind.

Suppose that instead of the term "inclusion" the term "in" be used. There is a legitimate sense in which the rules of chess, the definitions of king, queen, pawn, etc., are *in* the moves of the game. They determine what is valid. The game of chess is also *in* the kind of games denominated "indoor games." In the latter case, one of a kind is meant. In a certain sense, the law of the parallelogram of forces is *in* the course taken by a sailboat. It is a formula or rule by means of which the actual changes of direction and velocity of the sailboat may be determined. But there is no question of inclusion in a kind; there is no *kind* of parallelogram of forces of which the movement of a yacht may be said to be a member. There are many instances of the application of the principle or formula, namely, all the motions that may be resolved into a compound of forces operating in different directions. The exemplifications or modes of a principle may, I suggested in my former article, be termed a *class*. So far as any kind has at a given time a determinate number of members it may at that time be exhaustively divided. A class, in the sense defined, can not be *divided* because it has an indefinite range of possibilities of existential application.[2]

If universal propositions are of the nature of rules, formulæ, principles, laws, certain consequences are implied. I begin by saying that if only the Platonic theory of universals had been a logical theory, instead of an ontological one, it would be logically more correct than the Aristotelian. For the latter holds that form, the universal, is *in* existential singulars in some existential sense. The Platonic doctrine, interpreted logically, means that the universal is "in" them in the sense in which the rules of chess determine the value of the pieces. The supposition is, of course, contrary to historic fact. Plato regarded the universal, Beauty, as itself more beautiful than any actual thing, instead of treating it as the prin-

[2] Division and classification (as the latter is here defined) are not coördinates.

ciple by means of which, if it were ascertained, the characteristics might be determined in virtue of which any actual thing may be validly affirmed to be beautiful.

II

From the point of view of what has been said, every universal, like any rule, is a formulation of an operation to be performed. A universal does not claim to describe; description is in terms of the conjunction of qualities that enable us to discriminate and identify the kind of which a thing is. The universal "includes" the latter as a physician's prescription includes the medicines that are compounded by acting upon it when it is used as a direction of things to be done. Although C. S. Peirce did not employ the operational terminology, his account of the nature of "leading principles" is an anticipation of this conception of them. He starts from the fact that habits are active when we make inferences. At first we use these habits or are used by them without being aware of them. Gradually we become conscious of them on the basis of the consequences they yield. We then find that some of these habits in their recurrences produce consequences that are stable while others produce consequences that are unstable. The former as they are formulated become consciously guiding principles in drawing further inferences. We also learn that guiding principles may be arranged on the basis of their scope. The principle that a rotating disc of copper will come to rest when (if) placed between the poles of a magnet is confined in application to discs of copper. Other principles are found to be directive or guiding principles in all inferences that persist in stability, that are not overthrown by subsequent operations. They are not premises, but they guide the formation of all premises and conclusions.[3]

The point of view here expressed is clearly operational. Moreover, it implies that selection of directive principles and their validation and invalidation is controlled by the *consequences* the operations yield when they are performed. While, then, leading principles are derived from natural operations, proximately from biological habits and ultimately from the natural operations from which biological operations are derived, they are not *mere* formulations of physical and biological operations. They present natural operations modified and controlled by the consequences (in the way of

[3] I am paraphrasing material found in *Collected Papers*, III, 162–170, and V, 365–368. The guiding principles of the highest order of applicability constitute the subject-matter of logic. This highly important factor, however, does not concern my further discussion, although in another context it is of fundamental importance.

valid inferences) which they produce.[4] Every art and craft utilizes natural operations but it modifies them to suit the purposes it has in view, the objective consequences to be produced.

It is my conviction that Peirce has laid the basis for a valid logical theory of universals. It is the business of leading principles, as formulæ of operations, to guide us in the drawing of inferences. They accomplish this task by indicating what qualities of things are characteristic of the presence of a specified kind of object or event. In uncritical common sense, as that distinguished what is merely empirical, inferences are drawn on the basis of qualities of things, the qualities being selected for logically irrelevant reasons; such as their intensity, frequency of appearance, congeniality to our emotions, etc. The laws or principles of science state those operations by the consequences of which we can determine what qualities are evidential signs and what are not. An "empirical" law states a general fact; that is, the recurrent presence of a certain set of conjoined traits. But it does not get beyond the descriptive; it is circumstantial, resting upon the accumulation of spatio-temporal conditions in the sense in which conditions mean circumstances.[5] Such a description can not be exhaustive. But when we can establish a relation between one character of being such-and-such and another such-and-such character, we can direct experimental observation to determine whether the conditions are present that as characteristic traits, warrant an inference.[6]

The proposition, to recur to an illustration of the previous paper, that professional runners have hypertrophied hearts may state a "general fact," one confirmed by every case examined. But if an inherent relation between violent muscular action, forced respiration and excessive heart action be established, and if the relation of these characters can be further shown to be a mode determined by laws of physico-chemical action, then the general fact rests on something more than enumeration of circumstantial conditions. It be-

[4] Peirce repeatedly expresses his sympathy with scholastic realism as against nominalism and conceptualism. In so doing, he interprets the Universalia as natural operations, holding that the weakness of the other two theories arises from failure to note that *ways* of action are characteristic of nature. When the principles are repeatedly used as directive principles of operations, their consequences become more coherent and continuous; thereby existential material becomes more *reasonable*. Failure to note this latter point is the chief thing Peirce had against the pragmatism of James, both using test by consequences.

[5] See the previous paper, p. 253.

[6] Since technically, the inference is subject to the fallacy of affirming an antecedent because the consequent is affirmed, even the greatest number of different operations converging to a common point can never yield more than probability as regards a physical or existential law, as distinct from a dynamical law or definition.

comes, as we say, rational, not merely empirical. The related characters defined in the physico-chemical principles in question have an indefinitely wider range of application than simply to the case of runners and their hearts. The field of inference is indefinitely extended, as well as each case rendered more precise.

III

The following conclusions are implied in what has been said. (1) The problem of the relation of universals to individuals is a logical rather than an ontological one. For while the operations defined by universal propositions rest upon existential operations, they carry the latter over into the field of inference, with such modifications as fit them to be determinants of evidence. The problem is to institute just *those* operations (form just those conceptions, definitions, laws) whose consequences disclose the qualities of existence that are valid evidential characteristics. The formulation of a natural operation with reference to the accomplishment of this office introduces the former into a new distinctive context, and in this content the old problems of imitation, participation, immanent ontological residence, do not arise.

(2) Similarly, the problem of the relation of the possible to the actual takes on a logical form. A physical or existential operation, such as the blowing of the wind, the steering of a boat, is by description actual. The formulation, in which the relation of a conceptual antecedent to a conceptual consequent is set forth, has a meaning independent of a specified particular case. It has an indefinite number and variety of possible applications. This freedom from restriction to specified and specifiable cases, is the source of the notion that it is independent of *any and all* application, and thereby dwells in a realm of possibility cut off, save accidentally, from the actual. Since the universal is determined with reference to possible applicability, no such separation of realms exists.

(3) A Universal is *ideal.* It is such in the literal sense of being ideational. But it is also such in the sense of being normative or prescriptive. It is not only ideal in the sense of being non-physically existential (since it defines an operation *to be* performed, but also in the sense that it states conditions that the qualities of existence must satisfy and conform to if they are to be employed as evidential characteristics in inference. As already noted, ordinary empirical inferences are so grounded upon merely circumstantial evidence, the contingencies of spatio-temporal presentation and recurrence, that they are undirected, valid by accident rather than because of logical principles. If a necessary connection were shown between being black (blackness) and certain other characters, we

should have a prescription to perform just those operations of observation which would determine that black color as a quality in conjunction with other qualities is a sign from which the existence of a crow can be inferred; but only in this case.

(4) Universals, definitions, laws, are subject to revision. They are not merely hypothetical in linguistic form (*if-then* propositions) but what is more important they are, as prescribing operations, *working* hypotheses, and hence are subject to modification through the consequences to which they give rise. The revision of conceptions and principles is a constant phenomenon of scientific practice. I do not see how this fact can be harmonized with any conception of their nature save that they are themselves constituted *in reference* to the directive function they exercise. The notion that there is some universal in Being, whether existentially or subsistentially, which is eternal and immutable is only an awkward way of saying that if only inquiry proceeds long enough and with sufficient care some principle will finally emerge that may no longer need revision. The idea that the universals are already, in and of themselves, Eternal Objects, Essences, etc., and that by trial and error we finally hit upon the particular one which is applicable to particular cases is gratuitous. For in fact they are formed and reformed entirely upon the basis of their consequences in actual operation. The existence of error in their formulation needs no explanation other than is found in fact that we constantly *do* the wrong thing, perform the wrong operation, in all the affairs of life: i.e., we act in ways which produce other consequences than those intended. The history of the advance of science is the story of improvement in the instruments, the apparatus, etc., and the techniques of operations performed accompanying the improvement in mathematical symbolism; i.e., formulations.

IV

I conclude with a summary statement of how the theory advanced is related to traditional theories regarding universals. According to it, realism is correct in insisting upon universals and upon the fact that they enter in some way into the determination of known and knowable existences. But because of failure to note their operational character with reference to inferential inquiries, they are conceived by realism to be, so to say, static forms of Being in itself. Some contemporary forms of logical realism conceive of them as operations, namely, as the invariant operations of nature itself. But this improved version still treats the logical universal as merely a direct apprehension of natural operations, an immediate registration of them as it were. It thus fails to explain the adaptive

modifications natural operations undergo in becoming universals, or in being used as directive principles in inferential inquiry, as well as the revision they are constantly subject to. In addition the theory rests upon an assumption that can not be verified, viz., that there are operations in nature that are strictly and exactly immutable and invariant. That there are operations in nature *sufficiently* stable to be depended upon is testified to by every art and science. But that they are absolutely invariant is both unproved and unprovable, since it is a matter of circumstantial fact where we must be content with an order of probability.

Nominalism is thus on the right track as far as it insists upon the necessity of *symbols*. For the transfer of an operation from existence to an *if-then* form is accomplished only by means of symbols. But nominalism has always been guilty of ignoring the operational basis and function of the symbols upon which it placed its sole emphasis, and in most cases in consequence it ignored their functional and prospective reference. They were treated as mere practical conveniences and conventions. In so doing, nominalism denies the necessity of universals in regulating inferences, and is also guilty of self-contradiction. For if all existences are individual and singular, then words are also. In this case, they are not symbols; they can not have the representative character of standing for a number of different particulars, much less have the capacity for standing for operations that can be performed in an indefinite possibility of cases.

Although conceptualism has probably been, in recent times, the most widely entertained of the three theories, it is the most incoherent of them all,—not because universals are not conceptual and ideal but because of a completely wrong theory of abstraction and the nature of conception. It takes advantage of the ambiguity of "in" and "inclusion" already mentioned. This fact is shown in the use made by conceptualism of the notion of the "common" element, an element said to be extracted by sheer inspection and comparison of singular cases. If it *is* common, then the position of realism is conceded. If "brownness" is just a name for the brown quality common to a number of things, then *brown* is not just a quality, but in being common to all the different things is a nature, character, or universal. I shall not argue here for what seems to me to be a fact, namely, that as qualities of things no two *browns* are of exactly the same quality, the *brown* of this table being only the brown of *this* table. It suffices here to say that abstraction is of the nature of a definition of what it is *to be* brown and that this definition, as I argued earlier, involves moving into an order that is other than that of qualities—in this particular case one of vibrations,

absorption, and radiation. No amount of direct inspection and comparison of qualities will yield the needed conception or definition. What is common and constant is not the quality as quality but the logical function assigned it as an evidential sign of something else. Instead of being directly given for comparison and abstraction, the commonness in question is the *product* of operations that depend upon a universal or conception being already at command. We can not extract the common character of "horsiness" from horses until each singular has already been determined *to be* a horse, and this determination implies that, through the operative use of a universal, certain qualities have been warranted to be evidential characteristics of a certain kind of thing. Conceptualism escapes from logical realism only by assuming the very matter at issue in its reference to the "common."

At the close of the former article, it was said that the question of the subject-matter of logic—with especial reference to the question of whether or not it is strictly mathematical—depends upon the answer given to the question of whether there is a necessary relation between characters and characteristics, between generic and universal propositions. The present paper is, as far as it goes, an attempt to show that there is such an intrinsic relationship, the determination of characteristics and of evidential values in inference depending upon the use of universal propositions; while the latter in turn are framed and employed with express reference to their operative function in determination of evidential values. According to this conclusion, logic can be a coherent and unified theory only as it brings implication and inference into relation with each other. Otherwise, inference is either assimilated to implication, being treated as a defective case of it (as in many of the current doctrines of induction), or else it is ruled out of logic entirely. Another alternative is to recognize (as seems to be the case in logical positivism) inference alone and to treat logical and mathematical forms that determine implication relations as mere linguistic practical devices for handling empirical inferences, contributing nothing beyond practical convenience to the latter undertaking. The recognition of the correlative character of inference and implication liberates us from both of these one-sided positions.

JOHN DEWEY.

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FURTHER REFLECTIONS ON PEIRCE'S DOCTRINE OF THE GIVEN

IN a recent number of this JOURNAL, Professor John Dewey has done me the honor of drawing attention to certain "fundamental misconceptions" in my treatment of Peirce's doctrine of the "given" in experience.[1] A reconsideration of the points at issue in the light of his criticism, compels me to admit the validity of several of the strictures he makes. My original rendering of Peirce's ideas was in places regrettably muddled, and nothing but good can come from clearing up the confusions involved. At the same time, however, I am still not satisfied that Peirce's views *are* as internally consistent as Professor Dewey thinks them to be. This may merely be due to some unexorcised "misconception" that continues to lurk in my mind; but I believe it has an objective basis in fact. At any rate, the intrinsic interest of the whole question, together with its admitted importance for contemporary philosophy, would seem sufficient to justify further discussion.

My initial puzzlement arose in connection with the apparently incompatible references which Peirce makes to his category of "Firstness"—the non-committal term he uses to indicate the logically ultimate element present in experience. In some contexts, Firstness is represented as the essentially spontaneous, indescribable aspect of phenomena, that which forever transcends conceptual portrayal, and is only vaguely specifiable by denotation. In other passages, Firstness seems to be clearly identified with those atomic, brutely given "qualities of feeling" that are actually "there" in the phenomenal field. In still different contexts, Firstness is referred to not as actuality, but as "possibility," pure potentiality which is not definitely there, but is "a mere may-be." The reconciliation of these diverse commitments seemed to me extremely difficult, if not impossible, within the framework of a single theory.

This difficulty Professor Dewey declares to be a purely gratuitous one. It arises mainly from a failure to discriminate between two different aspects in which Peirce discusses Firstness, (*a*) as it is *per se*, completely isolated from everything else, and (*b*) as it is in relation to brute fact or actuality (Secondness). Considered in itself, Firstness *is* a strictly ineffable characteristic simply because it is what "totally and intimately pervades a phenomenon." In relation to Secondness—as the Firstness *of* Secondness—it is correctly denominated "possibility." But according to Professor Dewey, Peirce does not mean by that term, abstract "logical possi-

[1] My article appeared in Vol. XXXII (1935), pp. 533–544. Professor Dewey's criticism appeared in the same volume, pp. 701–707.

bility," as I erroneously supposed. On the contrary, he means by it "material potentiality" or "power," that which "is actualized only under conditions of interaction with something, but is there as a power nevertheless."[2] Moreover, this power is the very thing that provides Secondness with its generality, since it determines future manifestations of inefficacious qualities. Hence, "in Peirce's scheme, the potentiality and generality he is talking about are so far from being *logical* possibilities or universals that they provide the cosmological or physical basis for logical possibilities and universals."[3]

Now it must be admitted that there is a good deal in the text of Peirce to support such a reinterpretation. Certainly, in the passages to which Professor Dewey chiefly appeals,[4] it does seem to be the meaning involved; though even here the expression "material potentiality" is not explicitly employed. However, if these were the only, or even the principal, references that Peirce makes to Firstness, I should be inclined to agree that my original position was completely wrong, and Professor Dewey's position right. But I do not think the matter as simple as that for two reasons. (i) It is not at all clear to me that when Peirce speaks of Firstness, or quality, as "possibility," he is *always* thinking of it in relation to Secondness. (ii) Neither am I convinced that he *consistently* uses the term "possibility" as a synonym for "material potentiality" or "power." I shall deal with these two points very briefly in turn.

(i) In an early discussion of qualities as the basic elements in the "phaneron," Peirce states unequivocally that "the qualities themselves, *in themselves,* are mere may-bes, not necessarily realized. . . . The mere quality, or suchness, is not *in itself* an occurrence; it is a mere may-be. Its only being consists in the fact that there might be such a peculiar, positive suchness in the phaneron."[5] Here it seems patent that it is the qualities *per se,* quite apart from their relation to Secondness or to anything else, that are "may-bes" or "possibilities." Other excerpts of the same sort could readily be quoted. But a multiplication of instances would be superfluous, since Professor Dewey seems after all to be in agreement on this point. For on page 703 of his article he says, "Quality *per se,* in itself, is precisely and exclusively, according to Peirce, this potentiality." Neglecting for the moment the question of how potentiality is to be defined, I think the citation accurately specifies Peirce's meaning in certain places. Nevertheless, Professor Dewey

[2] Page 703 of Professor Dewey's article.

[3] *Ibid.*

[4] *Collected Papers* of Peirce, Vol. I, Paragraphs 422–426.

[5] I, 304 (italics mine).

later on declares, "that in his analysis Peirce takes Firstness, or quality, in two aspects; once as it is in itself and once as it is in relation to Secondness or existence, and that potentiality and generality attach to it exclusively and necessarily *in the latter connection.*" [6] The only conclusion I can draw from these conflicting statements is that Professor Dewey, like myself, recognizes sometimes that Peirce's references to Firstness are not wholly consistent with one another.

(ii) A similar inconsistency appears to me to pervade Peirce's use of the concept of "possibility." Sometimes, he does seem to employ it as a synonym for "material potentiality" or "power." [7] But I can not agree that he always employs it with this connotation. For there are places where he is indubitably talking of Firstness not as "material potentiality," but in terms of logical (or metaphysical) possibility and universality.[8] Thus, in introducing the idea of Firstness as "a purely monadic state of feeling," he insists that we must think of it "as a *pure nature,* or quality, in itself without parts or features, and without embodiment," [9] that is, as an essence to which localization is intrinsically foreign. In another place he says, "a quality is eternal, *independent of time* and of any realization";[10] and again, "the qualities themselves are mere *eternal possibilities.*" [11] Now it seems evident that when Peirce uses the expressions "pure nature," "independent of time," "eternal possibilities," he can not be alluding to material potentialities. For the latter are not independent of time or of localization; nor are they in any relevant sense "eternal." What he *is* referring to in such passages can only be logical or metaphysical universals, the *universalia ante res* of scholastic realism, a doctrine which he took over in modified form from thinkers like Duns Scotus.[12] This is the side of his philosophy which Professor J. H. Muirhead has rightly connected with "the Platonic tradition" in Anglo-Saxon thought. Peirce's profound belief in the reality and potency of "ideas," or universals, permeates a good deal of his writing, and even crops up in his phenomenology. Thus, in one place he explicitly declares that,

[6] Page 704 of his article (italics mine).

[7] As for example in I, 422.

[8] This point is also noted by two competent reviewers of Peirce's *Collected Papers,* Dr. Ernest Nagel in this JOURNAL, Vol. XXX (1933), p. 368; and Mr. R. B. Braithwaite in *Mind,* N.S., Vol. XLIII, p. 490.

[9] I, 303 (italics mine).

[10] I, 420 (italics mine).

[11] VI, 200 (italics mine).

[12] This, of course, is strictly inconsistent with the whole basis of his phenomenology, since anything that can be designated a "nature" or universal, should belong to the realm of Thirdness (Thought, Meaning), not to Firstness.

"We must suppose the existing universe, with all its arbitrary secondness, to be an offshot from, or an arbitrary determination of, a world of ideas, a Platonic world."[13] These ideas, moreover, are not otiose and impotent. They are "physically efficient," since they have "an inherent power of working their way to the governance of the world at last. True, they can not do this without machinery, without supporters, without facts; but the ideas somehow manage to grow their machinery, and their supporters, and their facts, and to render the machinery, the supporters, and the facts strong."[14] It is this "logical realism of the most pronounced type," as he calls it, that I think Peirce has oftenest in mind when he refers to Firstness as "possibility or abstract potentiality." The expression "abstract potentiality," indeed, reveals his meaning rather neatly, for the first part of it indicates the aspect of universality, and the second part the aspect of physical efficacy. Professor Dewey seems to me to overlook this "Platonic" strain in Peirce's philosophy, and, consequently, to interpret him to mean "material potentiality" even in those contexts where logical (or metaphysical) universality is undoubtedly intended.

In the latter part of his article, Professor Dewey goes on to make a general criticism of my whole treatment of Firstness as the "given" element in experience. He denies that what Peirce means by this category resembles in any way the givens of various modern philosophers; and he thinks I am "far off the track" when I see a certain similarity between it and such entities as "sensa," "presentations," "Lockeian ideas," etc.[15] Unfortunately, there is a misunderstanding involved here. In the passage where the comparison was suggested, I was dealing not with Firstness, but with the "phaneron," that is, with the special term which Peirce adopts to indicate "the collective total of all that is in any way or in any sense present to the mind." It was the *latter* which I pointed out was "broadly synonymous" with "Lockeian ideas," etc., not Firstness.[16] On the contrary, the same passage emphasized the fact that Firstness is a *basic constituent* of the phaneron, an "indecomposable element" of it. Firstness represents the logically primitive characteristic which belongs to all phenomena, sense-data and ideas included. Hence I fully agree with Professor Dewey that it is not akin to most of the givens which abound in contemporary episte-

[13] VI, 192. Cf. also VI, 194.

[14] II, 149. Cf. V, 101, where he points out that his doctrine of logical realism entails that universals, or "generals" are "really operative in Nature."

[15] Cf. page 705 of his article.

[16] Page 534 of my article. Here I was merely expanding a statement made by Peirce himself in I, 285.

mology, and I regret that my original presentation obscured this fact. Furthermore, I think that in its general outlines, Firstness answers far more adequately to a sound criterion of the given than do most of the modern theories of sensa. To the extent to which it is specified as the characteristic (*a*) that is logically foundational in, and completely pervasive of, all experience, (*b*) that we do not ourselves create but find in experiencing, (*c*) that has the unique and indescribable attribute of "sensuousness," and (*d*) that is a necessary condition of our knowledge of the real—Firstness would seem to be the "given" *par excellence.* As such it is a much subtler aspect of experience than any "sense-data," and should certainly not be confused with them.

I do not wish to deny, however, that the aforementioned misunderstanding was invited by my rash conjecture that there might be some rough similarity between Peirce's view of qualities as logical possibilities, and Santayana's doctrine of essences. This suggestion, though highly tentative, was sufficiently wide of the mark to merit criticism, and Professor Dewey was quite right in showing how unjustified it was. My present opinion on the subject is that when Peirce speaks of a quality of feeling as a possibility, what he means is that its *being* is logically possible, conceptually, but that when actualized in experience it is not a possibility any longer.[17] Or to put it in other words, as a universal or "pure nature," a quality of feeling is a logical possibility; as an experienced attribute which "inheres" in things, it is merely a particular. This seems to be implied by Peirce when he says, for example, "The mode of being a redness, before anything in the universe was yet red, was nevertheless a positive qualitative possibility. . . . That I call Firstness." [18] And in another passage he asserts, "The mode of being of the quality is that of Firstness. That is to say, it is a possibility. It is related to matter accidentally; and this relation does not change the quality at all, except that it imparts *existence,* that is to say, this very relation of inherence, to it. But the matter, on the other hand, has no being at all, except as a subject of qualities." [19]

Even granting such an emendation, can a consistent theory of the given be constructed from Peirce's various references to Firstness? I do not think it can; and to that extent the central contention of my original article seems to me to stand. For consider: Peirce's phenomenology purports to examine and analyze "the matter of experience as experienced." But where is the locus of this experience? Clearly, it can be only in the immediately present moment;

[17] I owe this suggestion to Dr. Paul Weiss.

[18] I, 25.

[19] I, 526.

there is no other place for it. But when we begin to inquire about the content of the present moment, we encounter the baffling fact that our question always comes too late. "The present has gone by, and what remains of it is greatly metamorphosed."[20] It thus constitutes a vague realm of "fleeting percepts," which forever eludes conceptual specification. Any judgment we make about it must always be essentially unlike the reality; "every description of it must be false to it."[21] The logical upshot of these considerations ought properly to be that Firstness as the given aspect of experience is completely ineffable and unknowable. But such a conclusion is not drawn, since Firstness is later described as the element of sheer quality which uniformly pervades each phenomenon as it occurs in the immediate present. It is that which is predominant in the ideas of freshness, freedom, spontaneity, and feeling.[22] The basic constituents of the phaneron may therefore be accurately denominated "qualities of feeling." The latter are in no sense abstractions; they are the concrete occupants of the immediate present, of "presentness as it is present."[23] At the same time, however, we are told in another context that although Firstness is permeated by freshness and variety, yet it is "not definitely there" in experience, but is only potential.[24] Qualities of feeling now resolve themselves into "mere may-bes," not actually present in the phaneron. They become "possibilities," whose sole being consists in the fact that they "might be" an aspect of phenomena. And we have seen the several senses in which the term "possibility" is employed throughout the text.

These various assertions still seem to me definitely incompatible with one another. Whether with sufficient restatement they could be combined into a single consistent theory, I can not say; but I am unable at present to see how it can be done. Moreover, I am inclined to think that they were not so combined in Peirce's own mind. For among his many strong points, careful systematic exposition was unfortunately not included. As Dr. Nagel has recently said, "a consistent system of ideas can not be forced upon him. He said different and incompatible things at different times."[25]

It is perhaps superfluous to add as a final word, that in thus calling attention to what I believe are certain discrepancies in his thought, I am not motivated by any desire to discredit the "father Parmenides" of Pragmatism. My admiration for Peirce's greatness

[20] I, 310.
[21] I, 357. Cf. also II, 141 and V, 568.
[22] I, 302.
[23] V, 44. Also, VI, 345.
[24] I, 373.
[25] THIS JOURNAL, Vol. XXXIII (1936), p. 109.

is not surpassed, I feel sure, even by Professor Dewey's. But for me this greatness consists precisely in the heritage of highly-suggestive and fertile, though loosely-integrated, insights which he left to posterity in his papers. Among these insights I count as not the least important for contemporary philosophy, his views on the given in experience.

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THE SOCIAL IDEAS OF THE WIENER KREIS'S INTERNATIONAL CONGRESS

THE "first International Congress for the Unity of Science," held in Paris last September under the auspices of the group originally known as the Wiener Kreis, was undoubtedly a significant philosophical event.[1] Its success as the beginning of an international series was an added testimony to the growing strength of the school which sponsored and arranged it. The second congress is to be held at Copenhagen from the 21st to the 26th of June, 1936.

This article discusses the social ideas of the first congress and of the Wiener Kreis in general. Our aim, accordingly, is not to synopsize the various papers that were read, but rather, in retrospect, to estimate the social residue of its proceedings, by which is meant their significance for social philosophy and social science. This approach is peculiarly warranted, we feel, not only because of the importance of the theme itself, but also by the fact that the challenging social implications of the Wiener Kreis have so far been rather undeservedly neglected in American discussions of the movement. It should be stated that what follows is not confined to statements made from the floor of the congress. The writer, in accordance with his purpose, had certain special questions and problems which were discussed at length in informal conferences with various leaders of the "circle." The results of these are incorporated herein, along with observations made at the congress proper.

In examining the social import of the congress, some general explanations of terminology and doctrine must be made. It should be noted that the "logical positivists" no longer wish to be known by that name. They have come to the conclusion, correct as it is

[1] Also designated in the official literature as "International Congress of Scientific Philosophy." At its sessions more than twenty countries were represented in a register of 170 participants. Ajdukiewicz, Carnap, Frank, Morris, Neurath, Reichenbach, Rougier, Russell, Stebbing, and many other equally well-known scholars formed its committees and contributed to its proceedings.

belated, that anything called "logical positivism" ought to be representative of the thought of Auguste Comte. Since no special identification with Comtism is acknowledged, they are now disposed tc drop the old designation, and refer to their movement as "scientific empiricism" or "logical empiricism." These terms may call to mind the "radical empiricism" of William James, and appropriately so, for this movement has significant connections, some premeditated and some unconscious, with the pragmatic thought of James and Dewey.

In venturing a formulation of some of the basic tenets of scientific empiricism, one must keep well in mind the fact that its doctrine is still fluid, is, without shame or apology, constantly changing.[2] This steady change is not an accident proceeding from the fact that the movement is still young. It is of its essence, and is one of the basic principles linking scientific empiricism to the philosophy of Dewey and James. For Neurath, Reichenbach, Carnap, and others have given up the quest for absolute certainty, and have come to interpret the "unity" which they seek in terms of growth. "Unity grows," says Neurath.

What do the scientific empiricists mean by the "unity of science" (*Einheitswissenschaft*) which is perhaps their most frequently emphasized principle of doctrine? Their problem in this regard arises out of the fact that science as it exists today is divided into specialized fragments unconscious of any essential unity, and often not even on speaking terms one with another. It is therefore necessary to work out, first, the unity of methodology, which, they feel, must run through all science, and second, the unity of language for all science. This language must contain a set of signs and terms which will put every science on speaking terms with every other, in the sense that what each science respectively says will be reducible to a common denominator. In this manner, what all the sciences say, taken together, will be seen as a systematic logical structure. Their hypothesis is that the common denominator is physics; that all scientific propositions are ultimately reducible to propositions in the language of physics. Herein is involved the principle of "physicalism" which is also basic to scientific empiricism.

What this school is reacting against is "metaphysical" philosophy, philosophy which refuses to cope with the concrete material of the sciences and to define its terms so that they can be identified in the physical world of human perception. This temper of mind clearly constitutes another bond of union with American pragma-

[2] In this connection, it may be of interest to note that with respect to the formulations here presented, a leading member of the Wiener Kreis has seen and approved of them—at least up to recent months!

tism and instrumentalism. Still another is to be found in a principle which is of central importance to scientific empiricism, namely, that the essential characteristic of science is its power to predict. No matter how much pre-occupation there may be in certain quarters with mathematico-logical symbolization, it holds, one must never lose sight of the fact that prognosis is the most important aspect of science. This point is of immense importance.

It may now be clearly perceived how such a structure and temper of thought provides for the constructive consideration of the social. For the conception of a unity of methodology in all science invites the attempt to establish a fruitful relationship between "natural" science and "social" science, at precisely that point which is of most creative significance in the early stages of a science, i.e., methodology. Moreover the courageous insistence upon prediction as the essential criterion of science would make for a realistic conception of social science—one that would be satisfied neither with metaphysical "explanations" of social phenomena, nor with elaborate systems of symbolization which are of no practical import. Prediction leads to control; indeed, it is only through prediction that control can be gained at all. If, therefore, social science is ever to be the instrument of social control, and if society is ever to realize the benefits of intelligent control of its own forces, it will be only through the *sort* of social science here spoken of.

These considerations point to the possibility of constructive contributions towards the building of an adequate social science. It remains to be seen, however, to what extent scientific empiricism is utilizing these possibilities and actually realizing the potentialities which it undoubtedly possesses. No one could maintain, for example, that the scientific empiricists are primarily interested in social questions. Hardly more than two out of the eighteen sessions at the first congress were given over to the consideration of social problems, although social elements entered occasionally into the other sessions.[3] Out of a total of nearly ninety papers presented, only five were directly devoted to social subjects; four or five more were in large part social in content, while perhaps another dozen touched more or less on the field of social problems.

How were the social themes handled? For the most part, general considerations, suggestions towards plans and prolegomena, were the order of the day, rather than concrete operations or definitive

[3] The main themes around which the several sessions of the congress revolved were as follows: Logic and Mathematics (2 sessions), History of Logic (2 sessions), Logic and Theory of Groups, Semantic, Protocol Sentences, Induction, Probability, Pseudo-Problems, Definition and Experience, Unity of Science, Project of an Encyclopedia, Language and Logic, Psychology and Sociology.

applications of method. Otto Neurath, himself trained as a sociologist, took the leading part in developing the social implications of scientific empiricism. In his paper, "Man and Society in Science," given at the Sociology section, Neurath stoutly maintained that sociology (as well as psychology) is capable of the same scientific status as other branches of knowledge which happen to be at present more advanced. Moreover, it is capable of this status, not by retreating into the realm of the subjective and the non-empirical, but strictly upon the basis of objective techniques of observation, and the steady improvement of its powers of prediction.

An intelligent attitude towards the problem of prediction in social affairs will recognize, according to him, that prognosis already takes place and that in some cases, predictions with respect to social affairs are better than those concerning "physical" phenomena. He points out, for instance, that the political expert will often forecast the result of tomorrow's election more accurately than the weather expert the state of tomorrow's weather. Moreover, does not every "physical" prediction involve "social" elements, namely, the very men, the social animals who do the predicting, whose social natures, motivations, purposes, must be taken into account.

It should therefore be recognized that prediction is not a problem of quality or kind, something entering into one realm of science, but wholly absent from another. It is a matter of quantity, of degree, present in all branches of science, in proportion as their respective methodologies have been developed. Neurath feels that a recognition of this fact will not serve to lay an insurmountable obstacle in the path of social science, but on the contrary will serve to organize its problems in fruitful fashion. For example, if one is concerned with the problem whether the economic conditions of production or the dictates of law have more influence on the course of history, the question should be formulated in the following way, presuming that one has clearly defined the concepts with which he is dealing: which will serve better as the basis of predicting the coming conditions of production plus the coming dictates of law—the data on present conditions of production, or the data on present dictates of law?

In the discussion which followed Dr. Neurath's paper, the present writer, primarily interested in having the reaction of Neurath and others, expressed the opinion that there are two types of philosophical work in which the movement might engage. These are not mutually exclusive but rather, necessarily complementary. The first concerns itself with analyzing and synthesizing the already discovered results of well-cultivated fields of science, such as mathematics and physics, the second, with planning and organizing, in a

spirit of unity, within fields still unorganized and embryonic, such as economics and sociology. The latter does not mean that the philosopher becomes a sociologist, any more than the former means that he becomes a physicist. It means that in either case he should take the point of view of the whole—first, to seek unity in what has already been done, second, to provide beforehand for unity in what remains to be done. Important as the first is, the second task is even more important and more necessary, and should by no means be neglected by scientific empiricism. If the unity of science is to mean the unity of all science, the consideration of the social can not be delayed; this realm must be envisaged and planned for from the beginning. While the slogan, from the metaphysical to the physical, expresses part of the task, an addition was suggested—from the metaphysical to the physical to the social. Dr. Neurath, in his reply, emphatically declared himself to be at one with practically all of these views, especially the analysis of the two tasks of the philosopher, and its implications in the present situation.

In the same session Dr. Emil Walter presented an interesting paper on "Prolegomena to an Axion System for Social Science," pointing out that Karl Marx, in 1844, had already presented a concrete theory of *Einheitswissenschaft*. Herr Walter did not develop, as he might have done, the fact that Marx's common denominator of all science (meaning science as doctrine, not the subject-matter of science) was the concept of history, not that of physics. Walter expressed the view that natural and social science must be considered as an organic whole, that the development of mankind can not be understood apart from natural laws. The development of social psychology and a sociological theory of history fruitfully related to the natural sciences should result in the formation of a system of axioms for social science.

Neurath on another occasion expounded the plans for an encyclopedia. Something of the social flavor of this project can be realized from the watchword pronounced by Neurath at the conclusion: "Unity of science, and fraternity among the new encyclopedists." This direct comparison of the social side of logical empiricism with the French encyclopedists, while not justified by anything yet done, is significant with respect to what may be in store for the future.

The encyclopedia which Neurath has in mind, as may be expected, is one in which the principle of integration will be something more than the alphabet. An attempt will be made to bring out the living unity of science. At the same time the dangers of an easily won and artificial unity, as well as utopia-making, will be kept in mind.

It is noteworthy that the congress said nothing in respect to practical problems, social or political. It took no stand in relation to socialism, fascism, communism, democracy, and the economic and political struggles with which the world is filled today. This in itself is no reason for condemnation. The reformer and the practical politician are not the only ones who make contributions towards the solution of social problems, and the amelioration of human ills, any more than the general physician or the clever inventor can claim a monopoly of credit for contributions in the realm of the physical. Just as the physician or the inventor needs, as an indispensable prerequisite, a firmly established science, a developed body of doctrine and technical apparatus to use as a foundation, so the reformer or politician needs a sound structure of social science in order that his activity may be of real effect and lasting benefit.

While, therefore, social-minded people should by no means dismiss scientific empiricism as socially irrelevant simply because it does not plunge into the practical side of social problems, they may well wish to see a more extensive and vigorous activity in the scientific sense. It will be interesting from this point of view to survey the proceedings of the second congress. In this case, unlike the first, a general theme is laid down for the congress as a whole—the problem of causality. The setting in which this problem is conceived is that of physics and biology, and to a lesser extent, psychology. No special mention is made of social sciences proper. Yet, one might be justified in feeling that the progression from logic, mathematics, physics in the first congress to physics, biology, psychology in the second is definitely one which is working closer to an exploration of the realm of social problems. As a matter of fact, it is possible that there may be projected in the not distant future a congress specially devoted to the problems of the social sciences. Indeed, we have the unofficially expressed opinion that such a congress is as much a part of the general program as, for instance, the second congress, revolving around physics and biology.[4] These are encouraging signs. It is heartening in these times to see a fresh and vital philosophical movement at least aware of its social obligations. Especially should American sociology and philosophy welcome and encourage the emergence of the type of social discussion which "scientific empiricism" would seem to promise. For in America, at least in recent years, sociology appears to have suffered greatly from a tendency to compile unrelated groups of facts, almost without benefit of any kind of theory. It has tended to become fragmentary, not only unduly isolated from other sciences, but unduly compartmented within itself. Precisely what seems to be needed is unity

[4] Otto Neurath in a letter to the author.

and greater scope for the scientifically fruitful functioning of theory. In this situation the influence of scientific empiricism might be distinctly helpful. This, of course, remains to be seen. When, however, one reflects that this movement is committed to a methodology which, potentially at least, is as exact in the logical sense as it is realistic and fruitful in the practical sense, one feels that he may well anticipate contributions of lasting value.

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BOOK REVIEWS

Aristoteles. WALTER BRÖCKER. (Philosophische Abhandlungen, Band I.) Frankfurt am Main: Vittorio Klostermann. 231 pp. 8 M.

This is the first volume of a series intended as a contribution to the philosophy of the present, though without any preconceived point of view or any idea of forming a new school. Of the five volumes already published, three deal with historical figures (Aristotle, Meister Eckhart, Martin Luther), so that the interest of the series with the present must be understood as not excluding the past. In conformity with this attitude, the author of the work under review states that his task is both historical and systematic, namely, "so to understand Aristotle that this understanding can give a new impetus to our own philosophizing" (p. 5). Fundamentally this position is sound, since no philosopher, as such, is a mere antiquarian; our interest in thinkers of the past implies at best that the works of some of them still have a positive value for us, and at worst that some understanding of the development of thought, the rise and the outmoding of systems, is essential for our conception of our own function. On the other hand, Aristotle himself is a good example of the bad history produced by a systematic interest in one's predecessors, as Mr. Cherniss has recently shown. Perhaps the only conclusion that is warranted is that an author who deals with the past should be quite clear about what he is doing; and here at least the present author manifests a decided superiority over Aristotle—he states definitely that he is giving only the *Gründzügen* of Aristotelian philosophy, that he is systematizing Aristotle, and that there are different ways but no one right way of doing it.

This systematic treatment of Aristotle then is based on a double postulate: first, that the inquiry into motion is the fundamental question of philosophy; and second, that Aristotle's philosophy can be understood as the most acute and radical instance of such inquiry. The first of these themes links the whole work to the philosophy of

the present, but is not developed. The book proceeds to elaborate the second thesis, and the treatment is ordered as follows: Philosophy and Movement, Movement and Being, Movement and Time, Movement and Becoming, Movement and Soul, Movement and Word (sc. logic), Movement and God. For the most part, the book is an interpretation of particular passages in Aristotle's writings; but these passages are chosen in such a way that they fit together intc a comprehensive theory of movement in its various aspects. The interpretations are always penetrating, frequently original, and very suggestive.

R. S.

A World of Chance. Whence, Whither, and Why? EDWARD GLEASON SPAULDING. New York: The Macmillan Company. 1936. xxxiii + 293 pp. $3.00.

In recent times a query has more than once been heard as to the present philosophical whereabouts of the new realists of yesteryear. For one among them, at least, that question is now authoritatively answered. Professor Spaulding, in this compact and closely reasoned metaphysical essay, not only reaffirms the essential tenets of that school, but offers the most substantial application and development of them that we have had in this country in recent years. That an insistence on a pervasive externality of relations led naturally to the affirmation of "a world of chance" was evident enough from the start. Indeed it was precisely because of the "chance" connections that it affirmed that Bradley, for example, found such a doctrine unintelligible. That it is not only intelligible but is the world view most in harmony with the demands of rational inquiry is Professor Spaulding's major thesis, here presented with that careful regard for logical foundations, and for harmony with the best accredited results of the mathematical, physical, and biological sciences which has always characterized his thought.

In spite of its comparative brevity the book covers a wide range of philosophic problems, from the logic of propositions to the relativity of values, and its content is not easy to summarize. The following three doctrines are, however, central.

(1) The realistic implications of knowledge are reaffirmed and it is held that any alternative theory at some point presupposes realism, since it must claim (*a*) the objectivity of the propositions (meanings) through which its own tenets are communicated and (*b*) the existence of facts, external to the propositions, and independent of the knowing of them, which make these propositions true. Professor Spaulding is increasingly concerned with the status of propositions as the instruments through which, in rational inquiry at

least, facts are known. He even suggests the existence (p. 124) of a "proposition—predicament," since we can get at facts through propositions only if the propositions are true and can show that propositions are true only by means of further propositions. But we escape the predicament (pp. 126–127) by showing that propositions can disclose facts directly (as when we deal with propositions about propositions). Hence some propositions, at least, are not merely instruments of investigation.

(2) The structure of reality is exhibited as a hierarchy of qualities or properties, proceeding from the ultimate properties (Propertiness, Ultimacy, Contingency, Reality, and Possibility) of which all properties, including these five themselves, are instances, to particulars which are themselves not "instanced" by anything further. Professor Spaulding regards this qualitative hierarchy as having metaphysical priority because all things that are distinct at all are qualitatively distinct, and, apparently, whatever is qualitatively distinct is itself a quality (cf. pp. xv, 187). The pervasive contingency of the world is shown by the fact that at each step down from the "ultimate" properties, the instances of a specified property are not necessitated by the property itself (even necessity does not necessitate its instances) and that when there are instances their specific difference and number are contingent with respect to their common property. This seems to be pretty evidently true. It should be remarked, however, that the result is in a large measure determined by the ultimates with which Professor Spaulding starts. Even Bradley would not have held that such an unearthly ballet of bloodless categories as "propertiness," "dimensionality," and even "metricity" could necessitate instances of themselves. The analysis here given is rather an elaboration of the consequences of a metaphysics of the abstract universal than a justification of that metaphysics itself.

(3) The element of contingency in nature is exemplified by physical indeterminacy, which Professor Spaulding interprets as the co-presence in a situation of factors not causally connected with each other, and by levels of emergence in which an "emergent whole" is found to possess properties not determined by those of its constituent parts. It is emphasized that freedom in any significant sense requires that a result be not determined or not completely determined by some at least of its antecedents and hence should be, with respect to them, contingent. Thus rational inquiry is free from the distorting influence of custom, bias, etc.

There are many doctrines in this book that will, as the author observes, arouse dissent. Most venturesome, perhaps, is the thesis that there are properties which are instances of themselves (proper-

tiness is a property, contingency is contingent, ultimacy an ultimate) and that this requires a limitation in scope of the theory of types. And the view presented about the relativity of values is one that the reviewer, at least, would like very much to question. But Professor Spaulding presents his doctrines carefully, and with reasons, and an adequate criticism would require analysis at least as careful and as detailed.

A. E. M.

Obiter Scripta. Lectures, Essays and Reviews. GEORGE SANTAYANA. Edited by Justus Buchler and Benjamin Schwartz. New York: Charles Scribner's Sons. 1936. xiv + 319 pp. $2.50.

As gleaners in the wake of Mr. Santayana's two-score of books, the editors of this volume have gathered a sizable sheaf of his occasional writings not hitherto easily accessible to the general reader. The thousands who have lately been entertained by *The Last Puritan* will find the going hard. Most of the selections are strictly philosophical in import: five are articles or reviews from this JOURNAL; while the remainder deal with esthetic or literary matters. It is no chance occurrence that the two most valuable items, as Mr. Santayana himself agrees, are both public lectures in celebration of classical figures in the history of philosophy, Spinoza and Herbert Spencer. There can be no doubt that one of the tests of greatness in a philosopher is his capacity to illuminate the works of his major predecessors. At the same time, many American philosophers have indulged in that activity to the exclusion of more original speculation. Mr. Santayana has been a notable exception; and, no matter how great the temptation, one can not honestly wish that he had given us a large-scale history of philosophy at the cost of any of his personal views. The two addresses alone, "The Unknowable" and "Ultimate Religion," completely justify the publication of this miscellany, even though they cast some of the minor pieces into a comparative shadow. There are those, however, to whom Mr. Santayana's every written word possesses value; for, like the true poet that he is, his deepest insights often are conveyed in apparently unpremeditated hints or intimations. Such persons will be gratified to learn that this volume includes a long-needed bibliography of his published writings to March of the present year.

H. A. L.

L'évolution de la physique et la philosophie. Centre International de Synthèse. Quatrième Semaine Internationale de Synthèse. Exposés par E. Bauer, Louis de Broglie, Charles Serrus, Léon Brunschvicg, Abel Rey. Paris: Félix Alcan. 1935. 150 pp. 15 francs.

The names signed to this group of speeches on the relation of modern physics to philosophy are sufficient guarantee of its seriousness and interest. It is rare to find in print a record of coöperation between men of such eminence in their particular fields. And indeed if one should like a brief statement about what "the Physicist" believes his science to imply for philosophy, he could do no better than to come to this volume for the information.

The hero—or villain—in the drama turns out to be *h*, that scandalous child of Planck, and most of the discussions consist in lamenting its existence or in explaining it away. Few of the members of the symposium seem to be aware of the necessity of facing the issue of how much of our philosophy and science is determined by the technique employed in constructing them. The scientists come out better, if this question is asked of them, than the philosophers. The latter in large measure still seem to be in the condition of assuming the truth of their own philosophical systems and of demanding of science that it square with them—*scientia ancilla philosophiae.* The scientists, however, show an awareness of their philosophical assumptions which is surprising to an American reader. Perhaps most of us would find that side of this little book the most profitable.

G. B.

Readings in Recent Political Philosophy. Selected, abridged, and edited by Margaret Spahr. New York: The Macmillan Company. 1935. xv + 776 pp. $3.90.

This is an exceptionally useful selection of readings from the literature of political theory, the philosophy of law, jurisprudence, and social philosophy in general since the American and French Revolutions, and admirably supplements Coker's selections. After six basic documents of these two Revolutions, there follow selections from Burke, de Maistre, Bentham, Austin, Savigny, Maine, Kant, Hegel, Mill, Spencer, Green, Bosanquet, Treitschke, Owen, Marx & Engels, Proudhon, Kropotkin, Sorel, Lenin, Shaw, Cole, Duguit, Krabbe, de Maeztu, Laski, Dicey, John Dickinson, Stammler, Pound, Cardozo, Wallas, Bentley, Follett, Dewey, Rocco, Gentile, Lippmann, Butler, Lorwin, and Brailsford.

With two or three exceptions, these authors would be recognized by scholars in the field as of indubitable importance, and the value

of the emphasis on the philosophy of law would also be accepted. There would be less unanimity on the wisdom of the particular selections from among the writings of each, but, on the whole, the compiler has shown good judgment and has kept in mind the practical end of instruction to be served by such a volume. The few pages saved, however, by omitting the indications of cuts in the text are scarcely sufficient justification for this lack of scholarly care in editing the selections. Brief historical comments and references add to the usefulness of the collection.

H. W. S.

OTHER NEW BOOKS AND JOURNALS

THE NEW SCHOLASTICISM. Vol. X, No. 2. Sir Isaac Newton's Formal Conception of Scientific Method: *H. R. Burke.* Bergson's Approach to God: *J. A. Baisnée.* The location of Qualitative Essence I: Aristotle and Aquinas: *A. J. Halpin.*

ZEITSCHRIFT FÜR ÄSTHETIK ALLGEMEINE KUNSTWISSENSCHAFT. XXX. Band, 2. Heft. Die Ästhetik in den nordischen Ländern: *Kaarle S. Laurila.* Musik und Plastik bei den Griechen: *G. F. Hartlaub.*

REVUE NÉOSCOLASTIQUE DE PHILOSOPHIE. Tome 39, No. 49. La physique aristotélicienne et la philosophie: *A. Mansion.* La conception scolastique de la physique: *D. Salman.* Physique et philosophie: *F. Renoirte.* La science moderne de la nature et la philosophie: *Y. Simon.*

REVUE DE METAPHYSIQUE ET DE MORALE. 43e Année, No. 2. Réflexions sur les deux sortes d'electricité: *L. de Broglie.* Être et acte: *L. Lavelle.* L'astrobiologie et la pensée de l'Asie: Essai sur les origines des sciences et de théories morales (*suite*): *R. Berthelot.* Syllogisme catégorique et syllogisme hypothétique (*premier article*): *J. Picard.* Études Critiques—Sur les moyens et la portée d'une esthétique de la grâce: Notes méthodologiques à propos d'un livre récent: *E. Souriau.* Vers une rennaissance de l'idéalisme allemand: La philosophie d'Arnold Gehlen.: *M. Gueroult.*

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NOTES AND NEWS

The first volume of the new Polish year book, plans for which were announced more than a year ago, has just been published under the editorship of Kazimierz Ajdukiewicz, Roman Ingarden, and Kazimierz Twardowski. *Studia Philosophica* is the annual of the Polish Philosophical Society at Lwów, Poland, and will publish articles by Polish philosophers in English, French, German, Italian, and Latin, together with abstracts in French of Polish philosophical literature. One or two of the papers in the present volume are of monograph length, and this JOURNAL will publish brief reviews of them later on.

The table of contents indicates the high standard which the editors have set for their annual:

I. Papers.
- *K. Ajdukiewicz:* Die syntaktische Konnexität.
- *R. Ingarden:* Vom formalen Aufbau des individuellen Gegenstandes.
- *T. Kotarbiński:* The development of the main problem in the methodology of Francis Bacon.
- *H. Mehlberg:* Essai sur la théorie causale du temps. I. La théorie causale du temps chez ses principaux représentants.
- *A. Tarski:* Der Wahrheitsbegriff in den formalisierten Sprachen.
- *Z. Zawirdki:* Über das Verhältnis der mehrwertigen Logik zur Wahrscheinlichkeitsrechnung.

II. Report of Polish philosophical papers published 1932–1934.

III. List of lectures delivered to the philosophical societies in Poland during the academic year 1934–1935.

Communications for the editors should be addressed to Prof. Dr. Kazimierz Twardowski, ul. św. Zofji 46 m. 6, Lwów, Poland. Subscriptions should be sent to "Ksiązka" (A. Mazzucato), ul. Czarnieckiego 12, Lwów, Poland. The price of the first volume of *Studia Philosophica* is 18 Swiss francs.